No. 200200019

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

ProSeeds Marketing, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

RYEGRASS, PERENNIAL

'Somerville'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-fifth day of April, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.*

FORM APPROVED - OMB NO. 0581-0055 EXPIRES 12-31-96

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*

ProSeeds Marketing, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER

EDR

3. VARIETY NAME

Jas Somerville 3/30/a

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*

13963 Westside Lane, South
Jefferson, Oregon 97352

5. TELEPHONE *(include area code)*

(541) 928 - 9999

6. FAX *(include area code)*

(541) 924 - 5695

FOR OFFICIAL USE ONLY

PVPO NUMBER

20020019

FILING DATE

October 29, 2001

7. GENUS AND SPECIES NAME

Lolium perenne

8. FAMILY NAME *(Botanical)*

Poaceae

9. CROP KIND NAME *(Common name)*

Perennial Ryegrass

FEES RECEIVED

FILING AND EXAMINATION FEE:

$ 2450 + 255

DATE

10/29/01 12/18/01

CERTIFICATION FEE:

$ 432

DATE

3/25/05

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)* (Common Name)

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

Oregon

12. DATE OF INCORPORATION

May 16, 1990

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Dick Olson
13963 Westside Lane, South
Jefferson, Oregon
97352

14. TELEPHONE *(include area code)*

(541) 928 - 9999

15. FAX *(include area code)*

(541) 924 - 5695

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow instructions on reverse)*

a. ☒ Exhibit A. Origin and Breeding History of the Variety

b. ☒ Exhibit B. Statement of Distinctness

c. ☒ Exhibit C. Objective Description of the Variety

d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*

e. ☒ Exhibit E. Statement of the Basis of the Applicant's Ownership

f. ☒ Voucher Sample *(2500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository)*

g. ☒ Filing and Examination Fee ($2,450), made payable to "Treasure of the United States" *(Mail to PVPO)*

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)

☐ YES *(If "yes," answer items 18 and 19 below)* ☒ No *(If "no," go to item 20)*

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

☒ Yes ☐ No

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDERS SEED?

☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

20. HAS THE VARIETY OR HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?

☐ YES *(If "yes," give names of countries and dates)* ☒ NO

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*		SIGNATURE OF APPLICANT *(Owner(s))*	
NAME *(Please print or type)* Richard W. Olson		NAME *(Please print or type)*	
CAPACITY OR TITLE Pres	DATE 10-22-01	CAPACITY OR TITLE	DATE

STD-470 (03-96) *(Previous additions are to be destroyed)*

(See reverse for instructions and information collection burden statement)

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed Exhibits A, B, C, E; (3) at least 2,500 viable untreated seeds, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture wil be deposited and maintained in an approved public repository; (4) check drawn on a U. S. bank for $2,450 ($300 filling fee and $2,150 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.,* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application an other requirements to the Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Blvd., Beltsville, MD 20705 - 2351. Retain one copy for our files. All items on the face of the application are self explanatory unless noted belov Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $300 for issuance of the Certificate.

Plant Variety Protection Office
Telephone: (301) 504-5518

ITEM

16a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;

(2) the details of subsequent stages of selection and multiplication;

(3) evidence of uniformity and stability; and

(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified.

16b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group or related varieties:

(1) identify these varieties and state all differences objectively;

(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences;

(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

16c. Exhibit C forms are available from the PVPO for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

16d. Optional additional characteristics and /or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.

16e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

17. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant may **NOT** reverse this affirmative decision after the variety has been so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

20. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant should check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089.

20020019

Exhibit A:

Origin and Breeding History
EDR Perennial Ryegrass
'Somerville'
JAS
3/30/05

EDR perennial ryegrass (*Lolium perenne L.*) Is an advanced generation synthetic variety selected from the maternal progenies of 55 clones, each of which contained a Neotyphodium endophyte (table 3). An additional 21 clones served as added pollen sources (table 4). About 90 percent of the parental germplasm of EDR traces to plants selected from old turfs of the mid-Atlantic region of the United States. Additional germplasm was selected from Manhattan II, Loretta, and PI 231597 from Greece.

The parental germplasm of EDR originated from a program to improve perennial ryegrass for turf use initiated by the New Jersey Agricultural Experimental Station in 1962. During the period from 1962 through 1977 a search was made to locate elite perennial ryegrass plants thriving in old turfs throughout the United States. The most promising plants were found in warm, humid parts of New York City, New Jersey, Pennsylvania, and Maryland. The size, location, and appearance of these plants indicated that they originated from seedings made prior to 1940. Clonal evaluation and progeny tests conducted under turf maintenance showed that they had dramatically improved turf performance, a darker green color, a lower growth profile and improved resistance to many of the diseases, insects, and environmental stresses common to the mid-Atlantic region of the United States.

Perennial ryegrass is native to the eastern hemisphere. It was introduced to North America by early colonists from Europe and the British Isles in hay, bedding, and seed mixtures used to establish pastures and hay fields. During the past century, millions of pounds of perennial ryegrass were imported form New Zealand and Australia primarily for turf use. Hundreds of millions of pounds of Oregon blue tag perennial and Linn perennial ryegrass were also sold for turf use throughout the United States. Low priced seed and rapid establishment made these ryegrasses a significant component of many turf seed mixtures. They were generally short-lived, difficult to mow, and susceptible to many of the disease, insect, and environmental stresses common to the mid-Atlantic region of the United States. Their origin and adaptation to the cool-summer, mild-winter, maritime

climates of the British Isles, northwest Europe, southeast Australia, and New Zealand made them poorly suited as a long-lived attractive turf in regions with long, hot, humid summers, colder winters, and the many pests common to hot, humid, stressful environments.

Seed growers, farmers, and research institutions, in the British Isles and Europe, including the Welch Plant Breeding Station and the major seed companies of the Netherlands selected, developed, and distributed improved perennial ryegrass cultivars for their pastures and hay fields. Their lower-growing types with abundant tillers were more persistent and better adapted to long-term pastures and also used extensively for sports turf in northwest Europe and the British Isles until the advent of Manhattan perennial ryegrasses (released in 1967) and other improved turf-types. These improved pasture-type varieties, such as S-21 and Pelo, found very limited used for turf in the United States because of higher seed costs, high susceptibility to Rhizoctonia brown patch, and poor mowing qualities under stresses of heat and drought.

An examination of thousands of old lawns, parks, sports fields, cemeteries, and golf courses starting in 1962 showed that of the billions of ryegrass seeds used to establish these turfs only a few produced plants able to persist and grow to produce attractive individual plants that were at least three feet in diameter. The most attractive plants were found east of the sheep meadow in Central Park in New York City, in southeast Pennsylvania (the parents of Pennfine and Birdie perennial ryegrasses), in Patterson Park, Riverside Park, and a school playground in Baltimore, MD, the campus lawn of the University of Maryland, College Park, MD, Warinaco Park, Elizabeth, NJ, and the Colonia and Atlantic City golf courses near Colonia, NJ and Atlantic City, NJ.

Tillers obtained from these selected plants were subsequently evaluated in frequently mowed turf trials. Plants obtained from crosses of the best performing clones were subsequently selected to initiate a long-term germplasm enhancement program using many cycles of phenotypic and genotypic recurrent selection. Phenotypic selection involved (1) selection of darker green, more compact, disease-free, highly tillering seedlings during winter greenhouse tests; (2) inoculation and selecting for resistance to crown rust caused by *Puccinia coronata*; (3) selection of attractive, leafy, lower-growing, darker green plants showing higher seed yielding potential in spaced-plant nurseries, and

(4) selection of attractive plants surviving in closely mowed turf trials subjected to stresses of heat, drought, disease, insects, and winter cold. Genotypic selection included extensive evaluation of single-plant progenies in closely mowed turf trials, and spaced-plant nurseries. Additional germplasm was added to the program as opportunities developed. Separate breeding composites were developed to help maintain genetic diversity and reduce inbreeding.

Following varying cycles of phenotypic and genotypic recurrent selection, turf trials were established at North Brunswick or Adelphia, NJ in 1994, 1995, and 1996 to evaluate single-plant progenies of the most promising selections. These turf trials were maintained at a 1½ inch mowing height and evaluated frequently for turf performance. The highest ratings were given to plots with an attractive appearance reflecting (1) relative freedom from disease, insect injury, and other stresses, (2) a rich medium-dark green color, (3) medium-high density, (4) medium-fine leaf texture, (5) a compact growth profile with a reduced rate of vertical growth, (6) clean mowing with less shredding of leaf tips, and (7) uniformity. Observations and ratings were also made on early spring greenup, and reaction to specific diseases, appearance during the late spring reproductive period, and rate of recovery from heat, drought, and other stresses.

A total of 5,700 plants were selected from the best performing single plant progenies in the above turf trials during the late summer of 1996 and February of 1997 and established in spaced–plant nurseries. Seventy-six clones were selected from these nurseries based on their early maturity, dark color and moderately low growth habit and transferred to an isolated crossing block immediately prior to anthesis in the late spring of 1997. Seed was subsequently harvested from 55 clones showing good floret fertility and the presence of a Neotyphodium endophyte in early July of 1997. Bulked seed was sent to Green Seed Company which was subsequently purchased by AgriBioTech, Inc. for additional evaluation and increase.

No objectionable off-type plants or variants have been observed in the reproduction or multiplication of EDR. EDR is a uniform and stable variety.

Breeder seed of EDR will be produced and maintained by the New Jersey Agricultural Experiment Station.

Table 3. Maternal clones used in the development of EDR perennial ryegrass

Clone		Clone		Clone	
EDR-1		EDR-25		EDR-52	
EDR-2	NSE	EDR-26		EDR-53	NSE
EDR-3		EDR-29	NSE	EDR-55	
EDR-4	NSE	EDR-30	NSE	EDR-56	
EDR-5		EDR-32		EDR-57	
EDR-6	NSE	EDR-33		EDR-58	
EDR-8		EDR-34		EDR-59	
EDR-9		EDR-35		EDR-61	
EDR-10		EDR-36		EDR-62	
EDR-11		EDR-37		EDR-64	
EDR-12		EDR-38	NSE	EDR-66	
EDR-13	NSE	EDR-39		EDR-67	
EDR-14		EDR-40		EDR-69	
EDR-15		EDR-41		EDR-71	
EDR-16		EDR-42	NSE	EDR-73	
EDR-17		EDR-44	NSE		
EDR-20		EDR-45			
EDR-22		EDR-48			
EDR-23		EDR-49	NSE		
EDR-24		EDR-50	NSE		

Table 4. Parental clones used as additional pollen sources in the development of EDR perennial ryegrass.

EDR-7	E-	EDR-51	E+	
EDR-18	E+	EDR-54	E+	
EDR-19	E+	EDR-60	E+	
EDR-21	E-	EDR-63	E+	NSE
EDR-27	E-	EDR-65	E-	
EDR-28	E-	EDR-68	E+	
EDR-31	E+	EDR-70	E+	
EDR-43	E+	EDR-72	E+	
EDR-46	E-	EDR-74	E-	
EDR-47	E+	EDR-75	E+	
		EDR-76	E+	

E+ Clones contain a Neotyphodium endophyte
E- Clones are free of endophyte

Exhibit B:

Novelty Statement for EDR Perennial Ryegrass
'Somerville' JAS 3/30/05

The following summary outlines the distinctive characteristics of EDR. The Novelty of EDR is based on the unique combination of these characteristics. EDR is most similar to Manhattan II, but may be differentiated by using the following criteria:

1. The anthesis date of EDR is at least 2 days later than Manhattan II (tables 1A, 1B).

2. The mature plant height of EDR is at least 7 cm shorter than Manhattan II (tables 1A, 1B).

3. The panicle length (lower branch of inflorescence to apex) is a shorter distance for EDR than for Manhattan II (tables 1A, 1B).

4. The length of the flag leaf is at least 2 cm shorter than Manhattan II (tables 1A, 1B).

5. The length of the sheath of the flag leaf is shorter than Manhattan II (tables 1A, 1B).

6. EDR has improved genetic color compared to Manhattan II (tables 1A, 1B).

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURE MARKETING SERVICE
SCIENCE AND TECHNOLOGY PROGRAM
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(RYEGRASS)

OBJECTIVE DESCRIPTION OF VARIETY
RYEGRASS
(*Lolium* spp.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
ProSeeds Marketing, Inc.	EDR	Somerville Tag 3/30/05

ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code)	FOR OFFICIAL USE ONLY PVPO NUMBER
13963 Westside Lane, South Jefferson, Oregon 97352	200200019

Place the appropriate number that describes the varietal characteristics of this variety in the boxes below. Use leading zeros when necessary (e.g. 089). Descriptions of characters should represent those that are typical for the variety. Ranges may be given also. Measured data should be for SPACED PLANTS. Give additional description for all characteristics that cannot be adequately described in the form below. Append all pertinent comparative trial and evaluation data. The symbol " ▸" indicates decimal.

1. SPECIES:

__2__ 1 = *L. multiflorum* (annual or italian: includes Westerwoldicum) 2 = *L. perenne* (perennial) 3 = *L. rigidum* (includes Wimmeria)

4 = Hybrid (of species):_____ 5 = Other (Please specify): _____

2. PLOIDY:

__1__ 1= Diploid 2 = Tetraploid 3 = Other (Please specify):_____

3. DURATION:

__3__ 1 = Annual or Biennial 2 = Short lived perennial (3-4 years) 3 = Perennial (more than 4 years)

STANDARD CULTIVARS

1 = GULF	2 = WIMMERIA	3 = LINN	4 = PELO
5 = NORLEA	6 = ABERYSTWYTH S-23	7 = MANHATTAN	8 = PENNFINE

4. MATURITY (50% HEADED) Use standards from above for comparison:

__5__ 1 = Very Early 3 = Early 5 = Medium 7 = Late

___	DAYS EARLIER THAN...	___ STANDARD CULTIVAR
10	DAYS LATER THAN...	3 STANDARD CULTIVAR

5. MATURE PLANT HEIGHT (Use standard cultivars from above):

71.13 cm High

030	cm Shorter than.....	3 STANDARD CULTIVAR
___	cm Taller than	___ STANDARD CULTIVAR

200200019

6. **PERCENT WINTER DAMAGE (estimated as percent of the area appearing dead. Use standard cultivars for comparison):**

||0	Percent Damage of Application Cultivar		
||0	Percent Damage of	3	STANDARD CULTIVAR

7. **TURF DENSITY (Use standard cultivars from above):**

||	Tillers per 100 square cm		
||	Less tillers per 100 square cm than...	____	STANDARD CULTIVAR
||	More tillers per 100 square cm than...	____	STANDARD CULTIVAR

8. **FLAG LEAF (at full growth, use standard cultivars from above):**

13 ▲18cm Length (from ligule to tip) 0\|3\|.5 mm Width (at widest point)

|6 ▲35cm	Shorter than	3	STANDARD CULTIVAR	3 Flag Leaf at Boot Stage
| ▲	cm Longer than	____	STANDARD CULTIVAR	
0|2|.5	mm Narrower than.....	3	STANDARD CULTIVAR	
||	mm Wider than	____	STANDARD CULTIVAR	

1 = Deflexed
3 = Recurved
5 = Horizontal
7 = Semi-Erect
9 = Erect

9. **LEAVES:**

3 Vernation 1 = Leaves rolled in young shoots 2 = Leaves semi-rolled (folded with rolled edges) 3 = Leaves folded in young shoots

100 % Plants with anthocyanin in lower leaf sheath 2 Foliage Color: 1 = Yellow Green 2 = Medium Green 3 = Blue Green

10. **SPIKE:**

3\|6\|7 mm Spike length (tip to internode below lowest floret)

244	mm Shorter than	3	STANDARD CULTIVAR
|	mm Longer than	____	STANDARD CULTIVAR

\|497\| mg per ten spikes (trimmed to internode below lowest floret)

|270|	mg lighter per ten spikes than	3	STANDARD CULTIVAR
||	mg heavier per ten spikes than	____	STANDARD CULTIVAR

7\|.5 florets per spikelet

PERCENTAGE OF PLANTS WITH:

Rachis:	1|0|0 % Smooth	|| % Rough
Spike Color:	1|0|0 % Green	|| % Purple
Lemma:	||0 % Awned	

\|\| mm Awn length 8.18 mm Glume length

10. SPIKE (*Continued*)

____ 1 = Spikelet length nearly equal to outer glumes
2 = Spikelet length much longer than outer glumes

11. COLEOPTILE:

___ % Plants with anthocyanin in coleoptile

12. ANTHER COLOR:

___ % Plants with white anthers

1 0 0 % Plants with yellow anthers

___ % Plants with purple anthers

13. ROOT AND PLANT CHARACTERISTICS:

__0 % Plants with prostrate growth habit

___ % Plants with flourescent roots

1 0 0 % Plants with upright growth habit

14. SEED:

___ mg per 1000 seeds ___ mm Total length of 10 seeds ___ mm Total Width of 10 seeds

15. DISEASE (0 = Not Tested, 2 = Highly susceptible, 4 = Moderately Susceptible, 5 = Moderately Resistant, 8 = Highly Resistant)

0	Crown Rust (*Puccinia coronata*)	5	Dollar Spot (*Sclerotinia*)
5	Brown Patch (*Rhizoctonia*)	0	Leaf Spot (*Helminthosporium*)
0	Mildew	0	Snow Mold (*Typhula*)
0	Red Thread (*Corticum*)	___	Other (Please Specify):_____

16. INSECT: (0 = Not Tested, 2 = Highly susceptible, 4 = Moderately Susceptible, 5 = Moderately Resistant, 8 = Highly Resistant)

0 Please Specify: _____

17. Give resemblance value in left column and variety code number in right column for variety with which comparison is made (1= less than, 2 = same as, 3 = more erect, more resistant, denser, more persistent, darker or greater height):

Resemblance	Character	Similar Variety	
3	Plant Habit (erectness)	3	1 = GULF
3	Tillering	3	2 = WIMMERIA 62
2	Winter Hardiness	3	3 = LINN
3	High Temperature Stress Resistance	3	4 = PELO
3	Turf Persistence	3	5 = NORLEA
3	Plant Color	3	6 = ABERYSTWYTH S-23
1	Vertical Seedling Growth Rate	3	7 = MANHATTAN
3	Crown Density	3	8 = PENNFINE
1	Mower Shredding Resistance	3	

20020019

18. GIVE AREA OF ADAPTATION AND INTENDED USE: Areas of United States where perennial ryegrass is adapted.

19. GIVE AREA TEST RESULTS PRESENTED FROM: See attachment 1.

20. COMMENTS:

Attachment 1

A morphological nursery designated 97PVPLP1 was established in September of 1997, in Albany, Oregon. Experimental design consisted of 9 entries; 4 replications per entry; 20 plants per replication; for a total of 80 plants per entry. Linn and Manhattan II were used as standards. Plants were established on 2.5 foot centers with a skip row between replications and between entries.

The nursery received 30 pounds of nitrogen per acre rate following establishment and 50 pounds of nitrogen per acre per year in 1998 and 1999. The fertilizer source was 15-15-15 and was applied as a split application with ½ applied in the spring and ½ in the fall. The nursery was sprayed twice each spring, 3 weeks between applications, with Tilt (2 oz/acre rate), to prevent stem rust. One pound of Karmex per acre rate was applied during late summer to prevent emergence of volunteer seedlings.

Data was analyzed using analysis of variance for a randomized complete block design. Means were calculated for each replication and then analyzed.

Exhibit D:

Additional Description

EDR Perennial Ryegrass
'Somerville' Jad 3/30/05

The cultivar EDR perennial ryegrass, is an improved turf-type. It exhibits darker genetic color and a more compact growth habit (tables 1A, 1B) than previously released perennial ryegrass cultivars such as Manhattan II. It has a late maturity and an anthesis date later than Manhattan II (tables 1A, 1B). The panicle length (lower branch of inflorescence to apex) is a shorter distance for EDR than for Manhattan II (tables 1A, 1B). The height of the flag leaf for EDR is a shorter distance than Manhattan II (tables 1A, 1B). In addition, the sheath length of the flag leaf is reduced compared to Manhattan II (tables 1A, 1B).

Table 1A

1998 Field Morphological Measurements

Cultivar	Genetic Color 9=dark	Heading Date (Days after April,1)	Anthesis Date (Days after April,1)	Mature Plant Height (cm)	Plant Width (cm)	Panicle Length (cm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Flag Leaf Internode Length (cm)	Leaf Blade Length (cm)	Leaf Blade Width (mm)	Leaf Blade Height (cm)	Leaf Blade Sheath Length (cm)
APR777	6.25	45.25	71.25	72.65	22.78	45.78	13.50	4.00	26.90	13.00	11.88	15.30	2.00	21.78	6.20
BFP	6.25	45.50	70.75	68.55	23.38	35.30	13.78	3.00	25.20	12.38	11.05	14.70	2.25	20.40	5.60
EDR	6.25	40.50	69.00	71.13	22.33	36.73	13.18	3.50	25.13	12.08	12.08	14.85	2.00	20.38	5.43
Manhattan II	5.25	39.00	67.75	78.65	23.13	46.88	14.20	3.50	27.38	13.25	13.58	14.85	2.25	20.53	5.25
Linn	3.00	30.00	62.00	101.13	25.00	61.15	19.53	6.00	36.00	16.23	18.68	21.75	4.25	31.78	8.98
LSD 5%	0.56	1.63	0.87	3.04	1.55	2.52	1.32	0.41	1.77	0.62	0.96	1.76	0.41	1.94	0.81
C.V.	7.95	3.18	1.05	3.34	5.55	4.80	7.60	8.80	5.43	3.99	6.18	9.15	14.58	7.28	11.30

Measurement taken in Albany, Oregon.
4 reps; 20 plants/rep = 80 data points.
▬ Cultivar under evaluation
▬ significant difference over two years one location.
▬ significant difference over one year one location.

Table 1B 1999 Field Morphological Measurements

Cultivar	Genetic Color 9=dark	Heading Date (Days after April,1)	Anthesis Date (Days after April,1)	Mature Plant Height (cm)	Plant Width (cm)	Panicle Length (cm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Flag Leaf Internode Length (cm)	Leaf Blade Length (cm)	Leaf Blade Width (mm)	Leaf Blade Height (cm)	Leaf Blade Sheath Length (cm)
APR777	5.00	56.00	74.75	64.30	37.75	36.08	13.15	3.50	24.93	11.78	10.75	14.68	3.25	22.63	7.93
BFP	5.75	54.75	73.75	63.88	36.33	33.58	11.28	3.50	23.30	12.03	11.03	12.98	3.50	21.53	8.55
EDR	6.00	51.75	72.00	65.05	35.80	35.05	11.43	3.25	22.70	11.30	11.18	14.15	3.25	22.05	7.80
Manhattan II	3.75	48.25	70.25	72.58	35.05	40.95	12.68	3.50	25.33	12.68	11.95	15.30	3.25	23.68	8.38
Linn	3.00	35.00	65.25	87.30	36.53	47.78	16.60	4.00	32.08	15.45	15.13	20.88	4.00	31.28	10.43
LSD 5%	0.45	1.31	0.88	3.66	2.07	2.09	1.15	0.34	1.49	0.68	0.81	1.15	0.41	1.62	0.68
C.V.	7.45	2.13	1.01	4.46	4.83	4.63	7.57	8.26	4.99	4.73	5.79	6.41	10.15	5.80	6.87

Measurement taken in Albany, Oregon.
4 reps; 20 plants/rep = 80 data points.
- Cultivar under evaluation
- significant difference over two years one location.
- significant difference over one year one location.

Table 2A 1998 Laboratory Morphological Measurements

Cultivar	Lemma Length (mm)	Lemma Width (mm)	Glume Length (mm)	Spikelets Per Spike	Florets Per Spikelet	Spike Length (mm)	Spike Weight
APR777	6.50	1.30	8.30	23.50	6.75	13.38	50.75
BFP	5.85	1.25	8.13	24.00	7.50	12.98	46.75
EDR	5.98	1.28	8.18	24.00	7.50	13.35	49.75
Manhattan II	6.30	1.30	8.48	23.75	6.50	13.08	52.25
Linn	6.80	1.48	10.43	25.50	7.00	14.25	76.75
LSD 5%	0.16	0.06	0.47	1.72	0.58	0.78	7.39
C.V.	2.18	4.10	4.60	6.02	6.87	4.90	11.58

Measurement taken in Albany, Oregon.
4 reps; 20 plants/rep = 80 data points.
▬ Cultivar under evaluation
▬ significant difference over two years one location.
▬ significant difference over one year one location.

Table 2B 1999 Morphological Measurements

Cultivar	Lemma Length (mm)	Lemma Width (mm)	Glume Length (mm)	Spikelets Per Spike	Florets Per Spikelet	Spike Length (mm)	Spike Weight
APR777	6.20	1.43	7.75	23.50	5.50	11.85	39.50
BFP	5.70	1.43	7.43	23.50	5.75	11.48	40.50
EDR	5.83	1.35	7.48	22.50	6.00	11.63	40.50
Manhattan II	6.30	1.38	8.55	23.00	6.25	12.85	46.25
Linn	7.05	1.53	10.15	23.25	6.75	14.00	69.50
LSD 5%	0.19	0.15	0.47	1.01	0.66	0.67	7.07
C.V.	2.60	9.00	4.89	3.58	9.09	4.60	13.21

Measurement taken in Albany, Oregon.
4 reps; 20 plants/rep = 80 data points.
- Cultivar under evaluation
- significant difference over two years one location.
- significant difference over one year one location.

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055 EXPIRES 12-31-96

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine is a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)

ProSeeds Marketing, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER

EDR

3. VARIETY NAME

Tax 3/30/10

Somerville

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*

13963 Westside Lane, South
Jefferson, Oregon
97352

5. TELEPHONE *(include area code)*

(541) 928 - 9999

6. FAX *(include area code)*

(541) 914 - 5695

7. PVPO NUMBER 20020019

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* If no, please explain.

[x] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company?
If no, give name of country _____

[x] YES [ ] NO

10. Is the applicant the original breeder? If no, please answer the following:

[x] YES [ ] NO

a. If origianl rights to variety were owned by individual (s):
Is (are) the original breeder(s) a U.S. national(s)? If no give name of country _____

[x] YES [ ] NO

b. If original rights to variety were owned by a company:
Is the original breeder(s) U.S. based company? If no give name of country _____

11. Additional explanation on ownership (*If needed, use reverse for extra space*):

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter.

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STD-470-E (03-96)